



Sun Ray™ Server Software 4.0 Release Notes

for the Solaris™ Operating System

Sun Microsystems, Inc.
www.sun.com

Part No. 820-0417-14
December 2008, Revision A

Submit comments about this document at: <http://www.sun.com/hwdocs/feedback>

Copyright 2002—2008, Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed at <http://www.sun.com/patents>, and one or more additional patents or pending patent applications in the U.S. and in other countries.

This document and the product to which it pertains are distributed under licenses restricting their use, copying, distribution, and decompilation. No part of the product or of this document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any.

Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, Sun Ray, Sun WebServer, Sun Enterprise, Ultra, UltraSPARC, SunFastEthernet, Sun Quad FastEthernet, Java, JDK, HotJava, and Solaris are trademarks, registered trademarks, or service marks of Sun Microsystems, Inc. in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

Netscape is a trademark or registered trademark of Netscape Communications Corporation.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

Federal Acquisitions: Commercial Software—Government Users Subject to Standard License Terms and Conditions.

Use, duplication, or disclosure by the U.S. Government is subject to restrictions set forth in the Sun Microsystems, Inc. license agreements and as provided in DFARS 227.7202-1(a) and 227.7202-3(a) (1995), DFARS 252.227-7013(c)(1)(ii) (Oct. 1998), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 2002—2008, Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, Etats-Unis. Tous droits réservés.

Sun Microsystems, Inc. a les droits de propriété intellectuelle relatants à la technologie incorporée dans le produit qui est décrit dans ce document. En particulier, et sans la limitation, ces droits de propriété intellectuelle peuvent inclure un ou plus des brevets américains énumérés à <http://www.sun.com/patents> et un ou les brevets plus supplémentaires ou les applications de brevet en attente dans les Etats-Unis et dans les autres pays.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a.

Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, Sun Ray, Sun WebServer, Sun Enterprise, Ultra, UltraSPARC, SunFastEthernet, Sun Quad FastEthernet, Java, JDK, HotJava, et Solaris sont des marques de fabrique ou des marques déposées, ou marques de service, de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays.

Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

Netscape est une marque de Netscape Communications Corporation aux Etats-Unis et dans d'autres pays.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciées de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

LA DOCUMENTATION EST FOURNIE "EN L'ETAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISEE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFAÇON.

Contents

Supported Platforms	1
Solaris Trusted Extensions Patch Requirements	2
What's New	2
Automatic Token Importation (ATI)	2
New Admin GUI	2
New OSD	3
Optional Pop-up GUI	3
Integrated VPN Support	3
PC/SC-lite Support	4
Kiosk (Controlled Access) Mode	4
NAT Gateway Device Support	4
Self-Registration GUI Enhancement	4
Supported Features for Trusted Extensions	4
What's Changed	5
utgstatus	5
Removed or Deprecated Features	5
SCF (Smart Card Framework) API	5
utsession Suspend and Resume Options	5
Known Problems and Limitations	6

GUI Issues	6
Apache Tomcat Out of Memory Error (Bug ID 6558040)	6
Remote Access (Bug ID 6508069)	6
Admin GUI Upgrade (Bug ID 6572246)	7
Self-Registration GUI (Bug IDs 6533780, 6538083)	7
SunMC (Bug ID 6507891)	7
Solaris 10 Zones	7
Solaris Trusted Extensions Issues	8
Device Issues	8
xscreensaver Issues	9
utsettings GUI in Trusted JDS	9
Installation, Configuration, and Upgrade Issues	9
Reboot Before Running utadm and utconfig	9
Keyboard Issues	9
Alt and Meta Keys	9
XKB Features on a Second DTU (Bug ID 6267227)	9
Auto-Repeat (Bug ID 6244200)	10
Kiosk Issues	10
Set Kiosk Application Type Correctly (Bug ID 6533804)	10
Sessions May Hang After CAM Migration	10
Unconfiguring Kiosk Mode Disables Kiosk Policy	10
Xinerama	11
Mass Storage Issues	11
L10N Issues	11
Portuguese Locale	11
NSCM Login Greeter (Bug ID 6561238)	11

Sun Ray Server Software 4.0

Release Notes for Solaris

Supported Platforms

Sun Ray Server Software 4.0 for Solaris is designed to run on the following operating systems with Solaris SPARC and x86 servers:

- Solaris 10 11/06 or higher SPARC and X86
- Solaris 10 11/06 or higher SPARC and X86 with Trusted Extensions

[TABLE 1](#) summarizes which versions of Sun Ray Server Software are compatible with which operating system versions.

TABLE 1 Sun Ray Server Software vs. Operating System Versions

Sun Ray Server Software	Solaris 8	Solaris 9	Solaris 10	Trusted Solaris
3	Solaris 8 Update 7 or higher (Solaris 8 2/02)	Solaris 9 Update 5 or higher (Solaris 9 12/03)		Trusted Solaris 8 SPARC (7/03)
3.1	Solaris 8 Update 7 or higher (Solaris 8 2/02)	Solaris 9 Update 7 or higher (Solaris 9 9/04)	SPARC and x86 (Solaris 10 3/05)	Trusted Solaris 8 SPARC (7/03) Trusted Solaris 8 SPARC (2/04)
4.0			Solaris 10 11/06 or higher SPARC and x86	Solaris 10 11/06 or higher SPARC and x86 with Solaris Trusted Extensions

Solaris Trusted Extensions Patch Requirements

In a Solaris Trusted Extensions environment, the following patches must be installed prior to Sun Ray Software installation. They are available on the SunSolve™ Website.

TABLE 2 Required Patches for Trusted Extensions

Platform	Patch Numbers
SPARC	120011-14, 125533-03, 126450-01, 126363-01, 126365-01, 127757-01
x86	120012-14, 125534-03, 126451-01, 126364-01, 126366-01, 127758-01, 125720-09

What's New

Sun Ray Server Software 4.0 for Solaris offers the following new features:

Automatic Token Importation (ATI)

Session access can now be controlled with token-related data, such as smart card IDs or Sun Ray MAC addresses, stored within an enterprise when this new feature is used in combination with registered token policies.

To utilize Automatic Token Importation, customers can write a small script to access their enterprise data (in a similar fashion to Automatic MultiGroup Hotdesking) and provide that data to SRSS via a simple key=value text API.

See the `ut_ati_script_interface(3)` and `utatiscrub(1m)` man pages for further details.

Note – This feature is available only after SRSS 4.0 patch rev 05 or later (127553-05, 127554-05, or 127555-05) has been applied.

New Admin GUI

The Sun Ray Administration GUI has been rewritten for the 4.0 release. It uses the Java Server Faces (JSF) technology to dynamically render a Web-based administration interface that complies with the most current Sun branding. The previously used CGI-based rendering logic has been completely removed.

New OSD

On Screen Display icons have been revised to present a clearer depiction of connectivity and other issues; however, the icon codes and DHCP codes remain the same. They are described in Tables B-1 and B-2 in the *Sun Ray Server Software 4.0 Administrator's Guide*.

Optional Pop-up GUI

The Pop-up Graphical User Interface allows the entry of network configuration parameters for a Sun Ray DTU from the attached keyboard. It is described in Chapter 7 of the *Sun Ray Server Software 4.0 Administrator's Guide*.

Although this feature can be useful in certain implementations, such as when employees use Sun Ray DTUs for access to their corporate web site from home, it can also be undesirable in other environments. SRSS 4.0 therefore contains two versions of the DTU firmware.

- The default version of the firmware, installed in the standard location:
`/opt/SUNWut/lib/firmware`

This version does not contain the local configuration capability. The standard installation mechanisms using `utadm` and `utfwadm` will install the default version.

- The configurable version firmware, installed in:
`/opt/SUNWut/lib/firmware_gui`

To use the firmware that includes configuration, the administrator must run `utfwadm` to install the firmware, using the `-f` option.

Integrated VPN Support

Sun Ray Server Software with the most recent firmware provides a VPN solution that does not require remote users to have separate VPN routers. It does require, however, that the corporate network utilize Cisco gateways that support the Cisco EasyVPN protocol. It also requires the optional Pop-up GUI firmware.

Integrated VPN support is available only on Sun Ray 2 DTUs:

- Sun Ray 2
- Sun Ray 2FS
- Sun Ray 270

PC/SC-lite Support

Sun Ray Server Software supports the industry-standard PC/SC-lite API to enable access to smart cards and smart card readers connected to Sun Ray DTUs.

PC/SC-lite 1.0 is available on the Sun Download Center. For installation instructions and further details, see the *PC/SC-lite 1.0 Release Notes*.

Kiosk (Controlled Access) Mode

The previous Controlled Access Mode (CAM) functionality has been replaced by Kiosk mode. Kiosk mode policy can be overridden for a user's smart card token or for a DTU's pseudo-token. For details, see Chapter 10 of the *Sun Ray Server Software Administrator's Guide for Solaris*.

Instructions for preserving old CAM configuration data and converting to the new Kiosk mode are included in the *Sun Ray Server Software 4.0 Installation and Configuration Guide for Solaris*.

NAT Gateway Device Support

Peripheral devices are supported when the Sun Ray DTU is behind a NAT gateway.

Self-Registration GUI Enhancement

In this release, the self-registration GUI has been enhanced for compatibility with PAM authentication. For details, see the man pages for `pam` and `pam.conf`. The self-registration GUI uses the PAM service name *utselfreg*. No specific PAM configuration is added to `/etc/pam.conf` for this service, so it defaults to the *other* PAM service, as described on the `pam.conf` man page.

Supported Features for Trusted Extensions

SRSS 4.0 supports the following features for Solaris 10 with Trusted Extensions:

- SRSS installation and configuration
- Audio
- Mass storage
- Authenticated smart cards

What's Changed

`utgstatus`

From this release onward, the `utgstatus` command displays server information only for trusted hosts.

Removed or Deprecated Features

SCF (Smart Card Framework) API

The Sun-proprietary SCF API has been removed from the SRSS 4.0 release.

`utsession` Suspend and Resume Options

The `suspend (-s)` and `resume (-r)` options of `/opt/SUNWut/sbin/utsession` have been removed from this release.

Known Problems and Limitations

GUI Issues

Apache Tomcat Out of Memory Error (Bug ID 6558040)

Apache Tomcat runs within the Java Virtual Machine (JVM) of the Java Runtime Environment (JRE). The JVM can be executed as client or server VM. In general the server VM reserves more memory and starts up more slowly than the client VM, but the server VM runs faster than the client VM over time.

Executing Tomcat in the client VM can cause out of memory issues on some systems. If you encounter any out of memory issues when accessing the Admin GUI, configure Tomcat explicitly to run the Admin GUI in the server VM:

1. **Modify the `jre.options` property in the `webadmin.conf` file (see `/etc/opt/SUNWut/webadmin/webadmin.conf`) as follows:**

```
jre.options=-server
```

2. **Restart the Admin GUI to apply the new setting:**

```
/opt/SUNWut/lib/utwebadmin restart
```

Note – If your system is a server-class machine (at least two CPUs and at least two GB of physical memory), the server VM will automatically be used even if you do not specify the server setting. For further details, see:

<http://java.sun.com/j2se/1.5.0/docs/guide/vm/server-class.html>

Remote Access (Bug ID 6508069)

Disabling remote access can result in an empty page.

The `utconfig -w` command allows you to enable or disable remote access to the Admin GUI. If remote access is disabled (the default), you must access the Admin GUI via `http://localhost:1660` or `http://127.0.0.1:1660`.

Accessing the Admin GUI via `http://<servername>:1660` will not work in this case and will result in an empty browser page. If you want to access the Admin GUI via `http://<servername>:1660`, you must enable remote access.

Admin GUI Upgrade (Bug ID 6572246)

The 4.0 Admin GUI requires a Web container that supports the Java Servlet and Java Server Pages (JSP) standards; earlier versions did not. Due to this change, Apache Tomcat 5.5 (or higher) has to be installed on the system, and the `utconfig` script has therefore been extended to ask for the location of an existing Tomcat instance.

If you perform an upgrade from a previous Sun Ray Server Software version (using a preserve file, for example), you must run `utconfig -w` after you have completed the upgrade. The `utconfig -w` command will prompt you for the Admin GUI settings, including the location of the Tomcat installation, after which the Admin GUI will be started automatically.

Self-Registration GUI (Bug IDs 6533780, 6538083)

If the wrong username or password is entered, the self-registration GUI does not allow text to be entered.

The workaround is to press the `Exit` button to relaunch the self-registration GUI.

Occasionally use of the self-registration GUI can result in a Java core dump, although registration continues to work as expected, and no other adverse side effects are observed. However, if `coreadm` is configured to name core dumps uniquely, disk space usage should be monitored.

SunMC (Bug ID 6507891)

The Sun Ray SunMC module does not detect the status of the Admin GUI correctly and will always report the Admin GUI as not running, whether it is running or not.

Solaris 10 Zones

S10 uses zones to permit multiple virtualized operating system environments to coexist in a single instance of Solaris, allowing processes to run in isolation from other activity on the system for added security and control. SRSS 4.0 is supported only in the global zone.

Note – Attempts to install SRSS 4.0 in S10 local zones generate appropriate error messages.

Solaris Trusted Extensions Issues

Device Issues

Audio

Remove the setuid-0 bit on the utaudio binary.

```
# chmod u-s /opt/SUNWut/bin/utaudio
```

Volume Control (Bug ID 6481380)

The volume control applet on the panel doesn't work in Trusted JDS.

To adjust the volume, use the three volume keys on the keyboard or launch the Sun Ray Settings GUI by pressing *Shift+Props*.

Flash Disk Allocation (Bug ID 6562880)

Allocating flash disk with UFS file system second time does not work.

The workaround is to hot-plug the device.

Multiple Slices/Partitions (Bug ID 6535611)

Sun Ray mass storage handles a single slice or partition for use by the Trusted Extensions device allocation framework.

Mount Points (Bug ID 6538004)

Mount points for USB mass storage devices with HSFS/UFS/PCFS file systems are not removed correctly.

xscreensaver Issues

Verify that following links are created so that xscreensaver can work correctly:

```
# ln -s /usr/openwin/bin/xscreensaver /usr/bin/xscreensaver
# ln -s /usr/openwin/bin/xscreensaver-command /usr/bin/xscreensaver-command
# ln -s /usr/openwin/bin/xscreensaver-demo /usr/bin/xscreensaver-demo
```

utsettings GUI in Trusted JDS

In Audio Output and Audio Input, mouse clicks cannot be used to enable/disable the check boxes; however, the following keys can be used for navigation:

- Tab to move to an option
- Space to select the option

Installation, Configuration, and Upgrade Issues

Reboot Before Running utadm and utconfig

In SRSS 3.1 and later, Sun Ray services are started only on the first reboot after installation. Consequently, after you install Sun Ray Server Software, you must reboot the Sun Ray Server before running utadm and utconfig.

Keyboard Issues

Alt and Meta Keys

Alt and Meta keys are swapped when XKB is enabled.

XKB Features on a Second DTU (Bug ID 6267227)

XKB-related features do not function when a user logs in to a second DTU with the same user ID.

Auto-Repeat (Bug ID 6244200)

On Solaris 10 with XKB enabled, auto-repeat may not work as expected in the CDE environment. Use of XKB with CDE is not recommended.

Kiosk Issues

Set Kiosk Application Type Correctly (Bug ID 6533804)

Some Kiosk session types allow additional applications to be launched. Within the Admin GUI, you can specify a new Kiosk application either by entering a path to an executable or by specifying a path to an application descriptor (a file that lists the various properties for the application).

At the moment, the Admin GUI cannot automatically determine the type (executable vs. descriptor), so you must specify the type correctly in the Admin GUI when adding a new application.

If you specify an incorrect type, the Kiosk session cannot start up correctly, and the affected DTUs will hang, typically with a 26D error.

If you encounter such an error, the workaround is to check the specified types in the Admin GUI and correct the settings, if necessary.

Sessions May Hang After CAM Migration

Procedures for preserving existing CAM configurations and migrating to Kiosk Mode are documented in chapters 4 and 7 of the Sun Ray Server Software 4.0 Installation and Configuration Guide. However, after performing the documented procedures, using `utconfig -k` and `utcammigrate -u`, you may find that sessions that should be Kiosk sessions according to policy appear hung and show only a black screen.

To recover from this condition, terminate these sessions. To ensure that all affected sessions are terminated, perform a cold restart of the Sun Ray server group.

Unconfiguring Kiosk Mode Disables Kiosk Policy

If Kiosk mode is enabled for smart card and/or for non-card sessions, then disabling Kiosk mode (using `utconfig -u -k`) also disables the Kiosk policy.

This behavior may be surprising in a failover group, where Kiosk policy is disabled for the entire group when Kiosk Mode is unconfigured on any server in the group.

Before unconfiguring Kiosk Mode on any host in a failover group, disable Kiosk policy, and perform a cold restart of the server group.

To perform maintenance tasks on Kiosk user accounts without unconfiguring Kiosk Mode completely, use the `/opt/SUNWkio/bin/kioskuseradm` tool instead of `utconfig`.

Xinerama

Xinerama is not supported in Trusted Extensions.

Mass Storage Issues



Caution – Failure to run `utdiskadm -r` before unplugging mass storage devices will cause loss of data. Make sure your users run `utdiskadm -r` before they unplug any mass storage device.

```
% /opt/SUNWut/bin/utdiskadm -r device_name
```

L10N Issues

Portuguese Locale

To enable the Portuguese locale, use the `pkgadd` command to install these packages:

```
# pkgadd -d . SUNWputes
# pkgadd -d . SUNWputo
```

NSCM Login Greeter (Bug ID 6561238)

If NSCM policy is enabled, the welcome message is not displayed correctly for all languages in UTF-8 locales (*fr*, *de*, *es*, *pt_BR*, and *it*). The messages *Please enter your user name* and *Please enter your password* may not appear or may be truncated because the length of the message varies in different languages.

